Flipping and Spinning in Possible Worlds

Consider Jack & Jill in Cambridge and Princeton respectively, each with a fair coin.
Jack & Jill can do one of three things

nothing, spin and flip

denoted as N S F

Denote the result of spinning in Cambridge by a_s
flipping in " " a_f
spinning in Princeton " b_s
flipping in " " b_f

Then each of a_s, a_f, b_s, b_f is either H or T.

Consider 5 worlds

I: (N, N) first member of pair refers to Cambridge
second " " " " Princeton

II. (S, S) with outcome (a_s, b_s)

III (S, F) – – – – – (a_s, b_f)

IV (F, S) – – – . (a_f, b_s)

V (F, F) – – . . (a_f, b_f)

Denote by A denote the antecedent of a counterfactual
So A can take the values (N,N), (S,S), (S,F), (F,S), (F,F)

and let $B(O)$ denote "the outcome is O,"

So we are considering counterfactuals of the general form

$$A \;\square\!\!\rightarrow B(O)$$

where if $A = (S, S)$, $O = (a_s, \lambda_s)$

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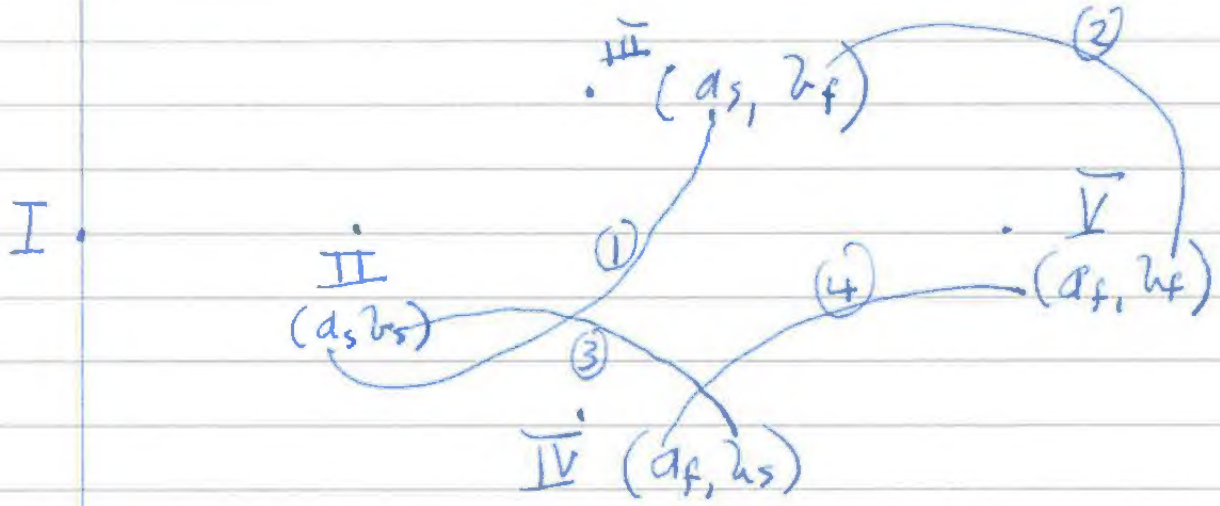
1. Let I be the actual world.

Then consider $\exists O!\,(A \;\square\!\!\rightarrow B(O))$

This is a Principle of Counterfactual Definiteness which is <u>False</u> under the assumption of <u>indeterminism</u>

But $A \;\square\!\!\rightarrow \exists O!\,(B(O))$

a Principle of Counterfactual determinateness is true.



How can we establish that the matching condition is satisfied in each of the four ties ①, ②, ③ & ④.

2. Let VI be the actual world.

Mr. Lewis says ① is true.
and ② is true.

but not ③ and ④.

3. Nested Counterfactuals:

III → V gives tie ② as seen from world III

IV → V gives tie ④ as seen from world IV.

But the two world V's we are led to via the two routes are not the same world

This is the Lindau-square problem, that can only be solved if we assume determinism.